

# [ELECTROSTATIC DISCHARGE PROTECTION DEVICE AND CIRCUIT THEREOF]

## Abstract

An electrostatic discharge (ESD) protection circuit including a detection circuit for detecting the ESD current and a clamp circuit for bypassing an ESD current between a first pad and a second pad is provided. The detection circuit is connected between the first pad and the second pad, wherein the detection circuit comprises a diode and a variable resistor tuned by a diode, and an output terminal of the detection circuit is connected to the variable resistor. The clamp circuit is connected between the first pad and the second pad and connected to the output terminal of the detection circuit. When the ESD current from the first pad or the second pad is detected by the detection circuit, a trigger voltage is generated to trigger the clamp circuit to bypass the ESD current due to a resistance of the variable resistor is changed by the diode.